

## REMARKS

The claims are claims 1, 10, 12, 29, 34, 46, 49, 52 and 55 to 58.

Claims 1, 10, 12, 29, 34, 46, 49 and 52 were rejected under 35 U.S.C. 103(a) as made obvious by the combination of Merjanian U.S. Patent No. 5,920,642 and Darbee et al U.S. Patent No. 6,130,726.

Claims 1, 10, 12 and 29 recite subject matter not made obvious by the combination of Merjanian and Darbee et al. Claims 1, 10, 12 and 29 recite "some control keys disposed in a thumb actuated cross configuration" and "the fingerprint sensor is integrated within a middle portion of the thumb operated cross configuration." The OFFICE ACTION admits that Merjanian does not disclose this limitation but cites Darbee et al as teaching the recited thumb actuated cross configuration. The OFFICE ACTION fails to provide any motivation for incorporating the fingerprint sensor of Merjanian into the OK key of Darbee et al. In contrast, this application states at page 11, lines 13 to 17:

"The illustrated embodiment has an arrangement in which the volume up/down keys 43 and channel up/down keys 45 are positioned in a thumb operated cross 40, with the finger print apparatus 26 located in the middle of the cross 40. This arrangement allows non-participatory identification of the user by analyzing the user's thumbprint when the user changes channels or the volume."

This application also provides clear teaching of the advantage of such "non-participatory identification of the user." There is no teaching in either reference that such a combination is feasible or advantageous. Note that Merjanian illustrates in Figure 7 platen 30 exposed to the user's digit and a set of keys 212H, 212I, 212J and 212K disposed in a cross configuration omitting the claimed middle portion. Darbee et al teaches a keyboard 15 including a

cross configuration of keys with a middle OK key. Darbee et al also discloses at column 4, lines 5 to 11 a fingerprint recognition device. Accordingly, both references teach the essential parts of these claims. However, neither reference includes any teaching that a fingerprint sensor can be used with a middle portion of a set of thumb actuated control keys in a cross configuration. The Applicants respectfully submit that the existence of the separate parts of the claimed invention in the prior art without the claimed combination is evidence of unobviousness. Accordingly, claims 1, 10, 12 and 29 are allowable over the combination of Merjanian and Darbee et al.

The OFFICE ACTION states at page 3, lines 33 to 38; page 7, lines 18 to 24; page 8, line 25 to page 9, line 5; page 10, lines 1 to 7; page 11, line 23 to page 12, line 4; page 12, line 21 to page 13, line 3; page 13, line 22 to page 13, line 3; and page 14, line 24 to page 15 line 6:

"Because of the nature of the downloaded materials that depend upon the identification of the user, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to integrate the fingerprint sensor of Merjanian within the OK or PPV control key as this would enable or activate the remote controller to download the materials subsequent to a successful validation of the id of the user, thereby providing the right materials to the right user."

The Applicant respectfully submits this argument fails to show that the combination of Merjanian and Darbee et al makes obvious this limitation of claims 1, 10, 12 and 29. Neither reference explicitly teaches the combination of fingerprint sensor and a middle portion of the thumb operated cross configuration as recited in the claims. Both references include control buttons in a cross configuration (Merjanian Figure 7, buttons 212H, 212I, 212J and 212K omitting the recited middle portion; Darbee et al Figure 1,

arrow buttons and OK button). Both references include fingerprint sensors (Merjanian, Figure 7, 3; Darbee et al at column 4, lines 5 to 11). Further, both references condition some actions upon correctly identifying the user via a fingerprint. Thus it is clear that the combination of the fingerprint sensor and the middle portion of the thumb operated cross configuration of control keys is not obvious from these references. In the absence of express teaching of this combination or of the non-participatory identification taught in this application, this combination is not obvious. Accordingly, claims 1, 10, 12 and 29 are allowable over the combination of Merjanian and Darbee et al.

Claims 34, 46, 49 and 52 recite subject matter not made obvious by the combination of Merjanian and Darbee et al. Claims 34, 46, 49 and 52 recite "said control keys include an activation key operable to activate the remote control device, and said fingerprint sensor is embedded in the activation key." The OFFICE ACTION states at page 11, lines 13 to 18:

"(see at least FIG. 7; it is noted that operating any of the buttons shown inherently activates the remote controller which does not need to be turned on per se with a button which is reserved only for turning on/off the remote controller)."

This inherency of Merjanian fails to make obvious the recited limitation. While the OFFICE ACTION states that the remote control of Merjanian does not need to be turned on, these claims recite "an activation key operable to activate the remote control device." Thus Merjanian not needing to be turned on does not make obvious the recited activation key. Likewise, while Darbee et al discloses power supply 30, supervisory circuit 31 and batteries 32, it fails to disclose that activation of any key is necessary to active the remote control unit. The OFFICE ACTION states at: page 12, lines 16 to 21; page 12, lines 17 to 22; and page 13, lines 20 to 25:

"However, in an analogous art, Darbee teaches a remote control device with an OK, or PWR control key (see at least FIG. 1) for the purpose of selectively downloading advertising and programming data to be stored on the remote control depending upon identification of the user of the remote control or based upon some assessment of the viewing habits or preferences of the user (3:31-39)."

Darbee et al includes no teaching regarding the operation of the OK key. Accordingly, this cannot make obvious the specific limitation recited in claims 34, 46, 49 and 52. Further, Darbee et al includes no teaching regarding the operation of the PWR key. The Applicants respectfully submit that one skilled in the art would believe this PWR key operates to activate the controlled device rather than the remote control device as recited in claims 34, 46, 49 and 52. Thus the cited teachings of Darbee et al teach activation of a different apparatus than recited in these claims. Merjanian and Darbee et al fail to teach that operation of a control key actuates the remote control device as required by the limitations of claims 334, 46, 49 and 51. In contrast, this application states at page 11, line to page 12, line 1:

"In another preferred embodiment, the finger print apparatus 26 is incorporated on the remote control device 41 as an 'activate remote' key that must be pressed in order for the remote to start functioning. In this embodiment, the finger print can be read when the remote control is activated."

Embedding the fingerprint sensor in such an activate remote key ensures capture of the user's fingerprint before any controlled operation. The combination of teachings cited in the OFFICE ACTION fails to make such a requirement. Accordingly, claims 34, 46, 49 and 52 are allowable over the combination of Merjanian and Darbee et al.

The OFFICE ACTION states at page 4, line 24 to page 5, line 3:

"The claimed 'key' in the limitation 'activation key' is broadly and reasonably interpreted to be a mechanism. The function 'operable to activate the remote control device' of the claimed 'activation key' is interpreted to be equivalent to the function performed by the combination of the fingerprint acquisition means (e.g., Merjanian, the platen 30 in FIG. 7), conveying means for conveying the fingerprint signal to the set-top box, comparison means at the set-top box for comparing the fingerprint signal to stored fingerprint data for a match and means responsive to any match for adjusting one of the service level and the preference setting to provide access to channels for which access is normally restricted (see at least 3:31-47). Thus, the above-listed combination of means of Merjanian performs the function of making the remote control become active."

The OFFICE ACTION further states at page 6, lines 3 to 5:

"Only a successful authentication could activate the remaining keys on the remote controller to perform their pre-programmed functions when the keys are being pressed on."

Merjanian states at column 3, lines 39 to 47 (overlapping the portion cited in the OFFICE ACTION):

"The combination allows the service level to be adjusted in response to a fingerprint match to provide access to channels for which access is normally restricted, for example, so that children or house guests--whose fingerprint data are unknown to the system--can not order pay-per-view events or other services without the assistance of an authorized person--whose fingerprint data are known and configured to authorize such access."

The existence of "channels for which access is normally restricted" implies the existence of channels for which access is not restricted that can be selected by children and house guests. Thus there are some channels that can be viewed without the verification of fingerprint required for the "normally restricted" channels.

Thus the device of Merjanian can operate without detecting a fingerprint in platen 30. This contradicts the above quoted limitation of claims 34, 46, 49 and 52. The Applicants submit that the combination of the fingerprint sensor and the activation key of claims 34, 46, 49 and 52 prevents use of the remote control without producing a non-participatory identification of the user as taught in the application. Accordingly, claims 34, 46, 49 and 52 are not made obvious by the combination of Merjanian and Darbee et al.

Claims 55 to 58 were rejected under 35 U.S.C. 103(a) as made obvious by the combination of Merjanian U.S. Patent No. 5,920,642, Darbee et al U.S. Patent No. 6,130,726 and Catalano et al U.S. Patent No. 6,766,040.

Claims 55 to 58 each recite a sleep mode. Neither Merjanian nor Darbee et al disclose the claimed sleep mode forgetting fingerprint data or that return from sleep mode re-acquires fingerprint data. Catalano et al does teach a sleep mode. However, the events which trigger entering the sleep mode and exiting the sleep mode in Catalano et al are not the same as the events noted in claims 55 to 58.

Claims 55 to 58 recite subject matter not made obvious by the combination of Merjanian, Darbee et al and Catalano et al. Claims 55 to 58 each recite "enter a sleep mode and forget fingerprint sensor data if none of said plurality of control keys is operated for a predetermined period of time." Catalano et al states at column 17, lines 48 to 53:

"Verification is ended, as depicted by step 446, after the results of the comparison are sent to the external device 140. Thereafter, sensor 130 is returned to the sleep mode, as indicated by step 300 (FIG. 3), and device 100 draws almost no power until the next request is received from external device 140 for a fingerprint verification."

Catalano et al teaches entering the sleep mode upon acquisition of the fingerprint via sensor 130. Catalano et al does not teach any control keys on device 100. Thus Catalano et al fails to teach that activation of any of a plurality of control keys can keep device out of sleep mode of a predetermined period of time as required by this limitation of claims 55 to 58. Accordingly, claims 55 to 58 are allowable over the combination of Merjanian, Darbee et al and Catalano et al.

Claims 55 to 58 recite further subject matter not made obvious by the combination of Merjanian, Darbee et al and Catalano et al. Claims 55 to 58 each recite "re-activate from said sleep mode upon operation of said activation key and re-acquiring fingerprint data via said fingerprint sensor." Respective base claims 34, 46, 49 and 52 require this activation key to be a part of the device including the fingerprint sensor. Catalano et al states at column 6, lines 22 to 32:

"Turning now to FIGS. 1 and 3, in normal operation device 100 remains in "sleep" mode to conserve power, as indicated by step 300 in FIG. 3. However, if at step 302 a determination is made that interface 150 has received a request from external unit 140 to receive and capture a fingerprint, then device 100 is "awakened," i.e., powered up, as indicated at step 304. Typically, external unit 140 sends a command packet to interface 150 requesting device 100 to sense and capture the fingerprint. Logic unit 110 receives and decodes the command packet and sends a signal that activates sensor 130."

Catalano et al teaches exiting the sleep mode upon a request from external unit 140. Catalano et al does not teach any control keys on device 100. Thus Catalano et al fails to teach that activation of a particular control keys causes the device to re-activate from the of sleep mode as required by this limitation of claims 55 to 58. Accordingly, claims 55 to 58 are allowable over the combination of Merjanian, Darbee et al and Catalano et al.

The Applicants respectfully submit that all the present claims are allowable for the reasons set forth above. Therefore early reconsideration and advance to issue are respectfully requested.

If the Examiner has any questions or other correspondence regarding this application, Applicants request that the Examiner contact Applicants' attorney at the below listed telephone number and address to facilitate prosecution.

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